

NEW VADADE VILLAGE PROFILE & DIRECT RESEARCH FOR DETAILED STUDY ON WATER AND WASTE WATER MANAGEMENT: A REVIEW

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ABSTRACT

This study focuses on understanding of the development sector of a village of Karvir Tehsil of Maharashtra state, named New Vadade. The research has been carried out through participatory approach by living in the village for time duration of 17 weeks, to understand the rural ecosystem in all its dimension- culture, tradition, governance and administration. The research has created an opportunity to get close to understand the ultimate developmental gaps and needs and created a new managerial knowledge at the service of the people.

The study has been conducted with the help of social science research tools and methods which include Participatory Rural Appraisal (PRA) activities, household survey, Focus Group Discussions (FGD), Interviews, etc. A detailed analysis of different development sectors of the village has been done, which comprise of sectors like Public Health, Agriculture & Industries, Education, Drinking Water supply, sanitation & solidwaste management.

KEYWORDS: Village Profile, Water Management, Waste Water Management, PRA, Directed Research & UMA

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INTRODUCTION

The vision of UMA (Unnat Maharashtra Abhiyan) is to put our knowledge, expertise and skills for the benefit of the marginalized and disadvantaged sections of the society. In a country where the majority of its population still resides in rural areas it seems pertinent that it be applied to the heart of this nation. To develop the outlook and the attitude to align development professionals, a course work was designed and at its core lies 17 week field work in a village. With this mission in mind, it is expected that we understand issues and identify solutions to it. It is expected that we empathize with people and develop the attitude that is required to work in this sector. The objectives of our study were as follows:

- To understand the village as a system
- Study of various sectors and their analysis
- To understand the issues faced by villagers on a day to day basis

For my study I had selected New Vadade village. New Vadade village is located at Karvir Taluka of Kolhapur District in Maharashtra. The Maharashtra Government had started a Dhudhanga Project 30-40 years back in Radhanagaritaluka.

That time Vadade village got fully merged in project land (prakapgrast). So the village was shifted to Gad Mudshingi. Before 2014 New Vadade was located in Gad Mudshingi and it was part of its Gram Panchayat From 25th February 2014 it was separated from Gad Mudshingi and it got its own Gram Panchayat.

LITERATURE REVIEWS

- **Village Level Information System - A Tool for Decentralized Planning at District Level in India**

Development of Village Level Information System as a tool for de-centralized micro-level planning and district level planning in India a case study carried out by **Dr. J. Adinarayana**. This study was based on rural and tribal-oriented in Thane district situated in Maharashtra. This tool is very simple and strong tool called as VLIS, which helps the decision makers and planners to produce different eco-socio-economic views. VLIS tool is useful for grass – root level planning and future development. Further, this community GIS tool is helpful for development of DSS for district level planning.

- **Information System for Baraunda Village Using Remote Sensing and GIS Techniques**

Remote sensing and GIS based information system for Baraunda village of Ladwa block in Kurukshetra district was carried out by **Debarati Roy, Rahul Kr. Singh and Sadhana Jain**. The foremost objective of this study is development of village level information system, which is useful in decision making based on their available resources. The basic information used for this purpose are roads, types of housing, water supply and sanitation, electricity, telephone, transportation and basic

Infrastructure facilities. Comprehensive information about the infrastructure facilities in detail of this village was further used for development of information system in.html environment. For this entire processes. IKONOS high resolution satellite data has been used in order to prepare large scale (1:20,000) base map supported with field survey. An information system of a village means an information related to an village in an technical environment.

- **Geomatics Based Web Based LIS (Land Information System) Using Integrated GIS and Remote Sensing Technology for Guwahati City, India.**

Web based land information system using remote sensing and GIS technology for Guwahati city was developed by **BiswajitSarma**. In this, an effort had been made to determine the present condition of land use and recognition of the patterns changes during past years with the evaluation of the impact of infrastructure development in provisions of transportation facilities, zoning regulations, drainage systems, public

utilities, industry tourism, population, etc., to meet up the challenges in management and planning of Guwahati city using Geomatics Technologies.

- **Information System for Rural Road Network Planning - A Case Study**

PrasadaRao, B. Kangadurai, P. K. Jain and Dr. Neelam Jain have developed information system for rural road network planning. Rural roads consist of other village roads and district roads. Almost 50% of villages are connected with road facilities. The Indian government has planned to provide full connectivity of roads with special programs namely (PMGSY) PradhanMantriGraminSadakYojana. According to this program, the villages having almost more than 500 populations will be connected with roads. For village and road information system, remotely sensed data combined with GIS will support for spatial planning. GIS is the very advanced tool for spatial planning and managing the spatial database,

which can assist the administrators and planners to identify the problem related to rural road development and its maintenance.

METHODS AND METHODOLOGY

The whole report has been divided in to two major sections. 1) Village Research and 2) Directed Research.

Village Report: The village report is an attempt to understand the life scenario of the village. The research has been done by collecting primary and secondary data through conducting Participatory Rural Appraisal (PRA) activities, surveys and interview and from literature surveys.

Directed Research: The first research focuses on water usage or requirement in the village, that has been done through household survey. The second part of the research looks at providing natural treatment solution to waste water disposed from the villages.

Participatory Rural Appraisal

The concept of Community is like every day Participatory Appraisal where everyone's views are appreciated, discussed and decisions are taken in the goodwill of the community. Our PRA activities are like just giving a structure to what they already know, which helps me to understand them in a better organised way. So I planned accordingly and kept so many other group gathering activities along with traditional PRA approaches which helped me to create more people participation in all our activities. The techniques used for PRA activities included Resource Map, Social Map, Transect Walk, Venn Diagram, Seasonality & Problem Ranking

Venn Diagram

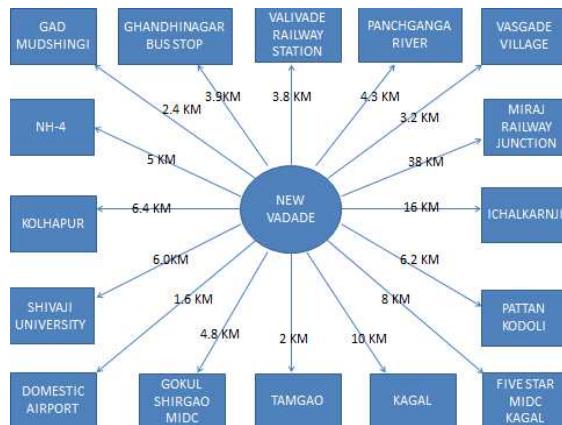


Figure 1

Seasonality

Seasonality is a tool to understand the various activities that villagers are involved in different seasons of the year. It gives an idea of major seasons of festivals, agricultural schedule, earning and expenditure tools, disease seasons, seasonal cycle of monsoon and other seasons. Since in our village temples were the main centers of people's social gathering, seasonality was again conducted in Ganesh temple with the help of villagers. The figure shows the seasonality calendar of the village



Figure 2

FOCUS GROUP DISCUSSIONS

The objective of this activity is to understand the various issues faced by the villagers in their day to day life. Every village has some issues, problems and needs.

New Vade					
Issue	Problem ranking - 9-11-2016 to 11-11-2016				
	MEN	WOMEN	BOYS	GIRL	TOTAL
Education	8	2	12	10	32
Road	2		2		4
Water - Drinking	14	12	12	10	(48)
Water - Agriculture	7	6	3	3	19
Toilets	1	-	-	-	1
Drainage	12	8	9	7	36
Solid Waste	10	3	14	9	36
Sanitation	7	5	12	9	33
Hospital	11	16	7	11	(40)
Play Ground	5	3	7	7	22
Employment	3	1	5	6	15
Tree plantation	4	2	7	3	16
W. Hospital	5	-	-	-	5

Figure 3

Table 1: Village Committees

Committee	Level	Chairman	Secretary	Work
Health Samiti	village	Anyone from village and one female member	GramSevak/NRHM	Monitors collection of Health issue and keep records- Try to provide a platform for health awareness & access to community for health services.
Education Samiti	village	Anyone from village and one female member	GramSevak	Sarva Shiksha Abhiyan (SSA) is a programme for Universal Elementary Education. This programme is also an attempt to provide an opportunity for improving human capabilities to all children through provision of community -owned quality education in a mission mode. It is a response to the demand for quality basic education all over the country

Table 1: Contd.,				
Tanta Mukt GaonSamiti	Gram Panchayat	Anyone from village	PolicePatel/ Patwari/Gram Sevak	Tries to solve village disputes within village only such that people need not to go in Police station. This committee serves a village court. The aim of this committee is to solve quarrels first at the village level. This committee in this society is just for sake.
Water Vyayasthapan Samiti	Gram Panchayat	Anyone from village	Anyone from village	Operation and Maintainer of water supply system.
Apatti NiyantranVyayasthapanSamiti	Gram Panchayat	Anyone from village	Patwari/Talathi	If some family becomes victim of natural disaster then, this committee serves as trusteeship agency for the family

Source-Mr. Dattatray Patil (Sarpanch New Vadade Gram Panchayat), Information is first collected from Sarpanch and then clarified by above mentioned committee sexist only for sake. In many villages sometimes Gram Panchayats are headed by Gram Sevak only

Village Profil

New Vadade is a Village in Karveer Taluka in Kolhapur District of Maharashtra State, India. This village is located at 160° 40' 7.89" N and 74° 01' 34.9" E/160° 40' 17.89" N and 74° 01' 24.9" E. It belongs to Desh or Paschim Maharashtra region. The area of Village is 239 Ha. It is located 9 KM towards East from District headquarters Kolhapur. 18 KM from Karveer Taluka. 356 KM from State capital Mumbai. New Vadade Pin code is 416118.

Climate

The climate in this region is of the tropical type. The village is 551 m above sea level and most of the topography is flat. Summers are very hot and winters are moderate. This year the temperature went to 33 to 35 deg Celsius (extreme 38 deg Celsius) in this region. The rainfall has seen a declining trend in the last few years and the rainy days have spread over the course of the year. This has impacted the agriculture negatively. The average rainfall received for the past 3 years has been 540mm.

Table 2: Demographics of Village Population

Category	Total	Male	Female	Sex Ratio
Total Population	1839	1011	828	1221
Population 0-6 years	165	78	87	896
ST Population	284	151	133	1135
SC Population	1	1	0	NA
Literate Population*	80%	85%	73%	
Total Working Population	955	606	360	

*Small Children not included, **Children and Old Age People

Education Status

The education status in New Vadade is good. There is a school upto 10th standard and there are 2 Anganwadi in village. After assessment the average pass percentage of school is 80%. However for Secondary school education and higher education New Vadade People are dependent on nearby Gad Mudshingi schools. For 11th and 12th students have to move to various places like Kolhapur, Kagal, Ichalkarnji, Pune, Sanglietc.

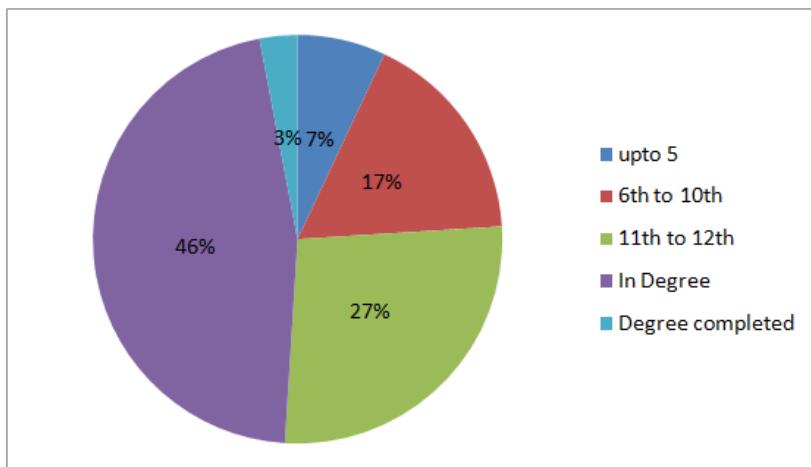


Figure 4

Health

There is no The Primary Health Centre (PHC) in New Vadade village but there are 3 private clinics.

Agriculture & Industrial

Agriculture is a kind of Job which makes someone independent. But this profession has now become a non-viable activity. Every year the numbers of farmers in India are decreasing. The economy of New Vadade is highly dependent on agriculture. Location on the Deccan Plateau, the rich black soil and the availability of water make highly suitable for agricultural activities. Agriculture is the main contributor to the economy of village. Its sugarcane industry contributes to over 5% of the sugarcane produced in the country and accounts for a significant share of sugar and baggase produced. The village is also an important centre for agro-products like sugar, pulses, chillies, turmeric, and food grains.

Sanitation & Solid Waste Management

Most households have private toilets inside or in the immediate vicinity. There are no toilets along the outskirts of the village and these people are dependent on the community toilets. The toilets are properly maintained and clean. The private toilets are mostly dependent on septic tanks and soak pits for waste water disposal. The Gavthan mainly has septic tanks while the farms see more dependence on soak pits. Very few households engage in open defecation. However, it is not completely absent.

No system for solid waste collection. So they dispose their garbage openly, inside the sewers and in other open areas. The improper disposal of SW has led to infestation by pigs and rodents throughout the village.

Drinking Water Supply

New Vadade village have its own source of water supply. The water source is well; the source is located 1 kms north of Village. The water is taken via 150 mm pipelines from the well to ESR located in village at ground level 556m from MSL and staging height 15 m having capacity of 20 KL.



Figure 5: Source of Drinking water supply

Drinking Water Situation

The household survey results show that most people are dependent on the scheme for drinking water. In farms, both bore well and open well water is used for drinking, as per availability. The results from the household survey are needed to summarize.

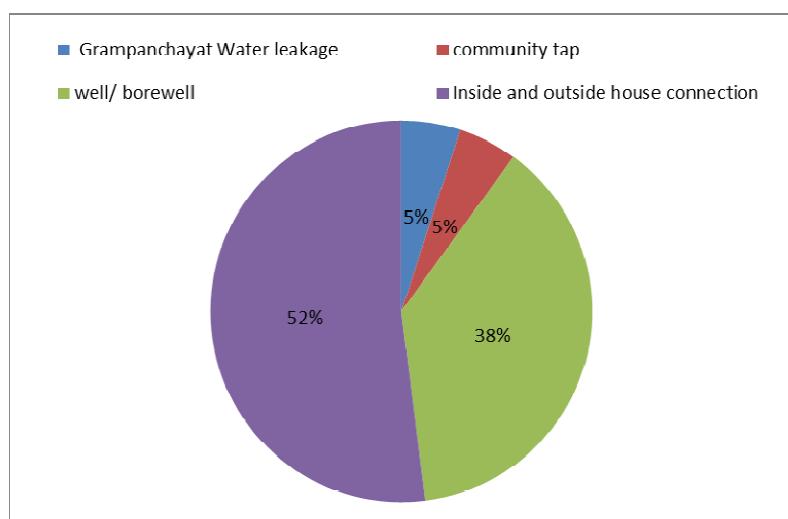


Figure 6: Source of Drinking water supply (October 2015)

Last year (2015), owing to the low rains from the year before, the drinking water situation has been quite bad. There were periods of 7-10 days when people did not get water from the scheme. Towards the end of the summer, water levels were very low in tube well. This affected not New Vadade, but almost every neighboring village has same situation

CONCLUSIONS

Based on the interactions and discussions we had, we have identified immediate needs which can be addressed small measures, such as:

- Provision of sweaters, socks & shoes to students of the ZP Primary School & Anganwadis
- Provision and installation of dry-san toilets in Gavthan area

Three major sectors have been identified for CSR activities, for which the implementation as well as the impact will have to be considered on a long term basis.

- Strengthening of Anganwadis
- Require to study on water management
- Require to study on waste water disposal management

REFERENCES

1. *Physical Improvement of Jharpada Village by Sokhi, B.S. and Ramesh, B., Jawahar Publishers and Distributors, (2003), pp. III.*
2. *Geographic information system, an introduction by Star, J. and Estes, J., Prentice-Hall, Inc., New Jersey (1990).*
3. *Remote Sensing and GIS Application for Urban Studies; by Subudhi, A. P., Sokhi, B.S. and Roy, P.S., (1999), IIRS publication.*
4. *Hydrogeomorphological studies in the Trichirappalli environs, Tamil Nadu, India using Remote Sensing technology, Map Asia 2000, Sankar, K.*
5. *Experiment in Land-Use Allocation with a Geographic Information System by Tomlin, C.D. and K.M. Johnston, Technical Papers, ACSM- ASPRS, St. Louis, Vol. 5, pp. 23-34, 1988.*
6. *Seminar report of “FOOD SECURITY: Bottom up approach” by Amit Kumar Ukey. Submitted to CTARA, IIT Bombay under completion of TD 694*